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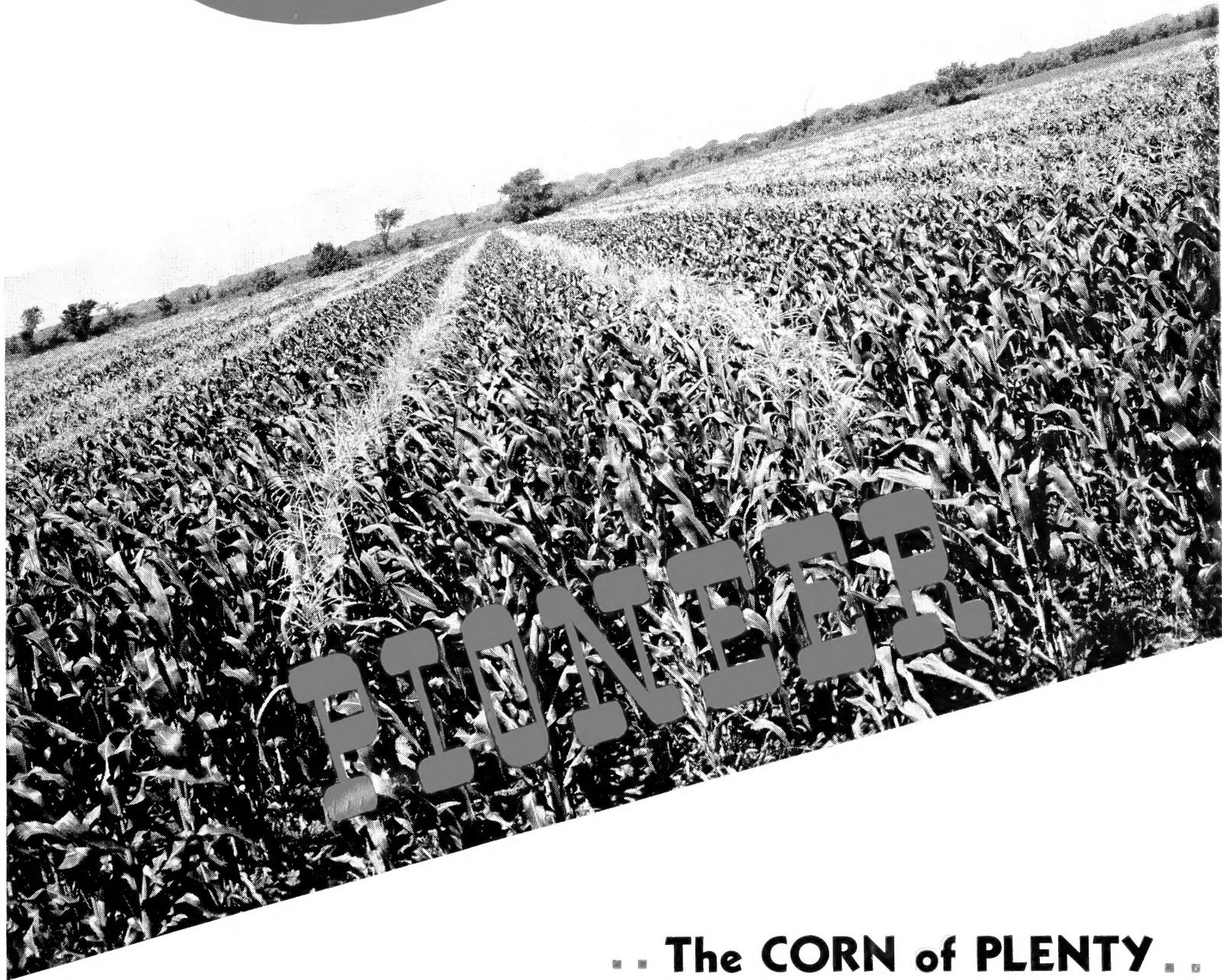
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Pioneer Hybrid

LIBRARY
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★ OCT 31 1944 ★
U. S. Department of Agriculture

Things You'll
Want to Know About...



.. The CORN of PLENTY ..

PIONEER

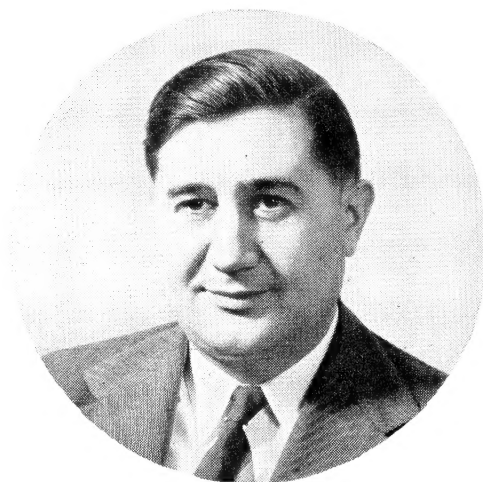
Never Ending RESEARCH

CONTINUES TO DEVELOP *New Improved Hybrids*

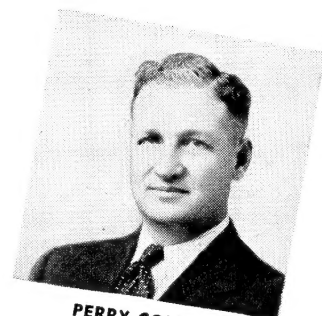
PIONEER CORN BREEDERS



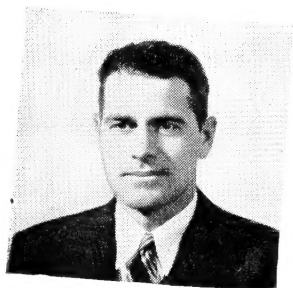
JAMES WEATHERSPOON



RAYMOND BAKER



PERRY COLLINS



MELVIN TEMPLE



SAMUEL GOODSSELL

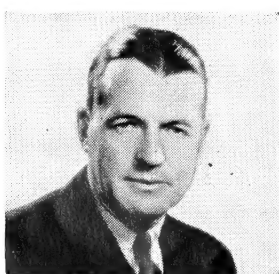


MARION ROSS



MURRAY BAWNER

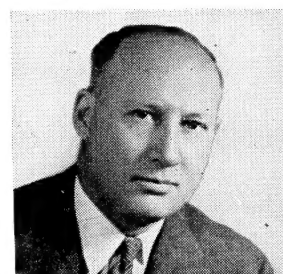
The basic foundation of Pioneer seed corn quality . . . and the development of improved new hybrids is dependent upon these corn breeders. Raymond Baker . . . corn breeding specialist for over 15 years . . . directs the Pioneer corn breeding staff of highly trained and experienced scientists . . . each a specialist in his own field.



RAY E. SNYDER



KARL H. JARVIS



A. R. MARSTON

A COMPLETE CORN BREEDING PROGRAM

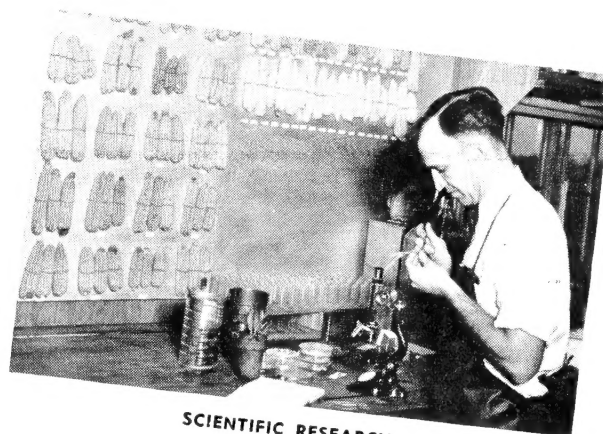
...the key to more productive hybrids...

Pioneer breeding program is never ending — continuing year in and year out — constantly striving to develop new hybrids superior to those now being produced.

A sound breeding program is the foundation of Pioneer quality . . . complete in every detail . . . from the production and selection of the inbreds . . . to the final testing of the hybrids.



UNIFORMITY OF PIONEER INBRED STRAINS



SCIENTIFIC RESEARCH



FIELD OF PARENT CORN



REMOVING TASSEL . . .
INBRED PLOT



TESTING THE YIELD OF
EXPERIMENTAL HYBRID

THE MAIN CORN BREEDING DEPARTMENTS

1. Developing new inbreds
2. Testing inbreds for diseases and insect resistance
3. Testing inbreds for yield, lodging resistance, etc.
4. Testing experimental and commercial hybrids
5. Production of parent corn from those inbreds proven to be consistently outstanding in performance

BETTER PIONEER HYBRIDS... *Come from* ENDLESS RESEARCH

HAND POLLINATING PLOTS

Pioneer maintains hand pollinating plots in Iowa at Johnston and Algona.
Pioneer breeding plots are maintained at Princeton and Harvard, Illinois
. . . Poseyville and Tipton, Indiana . . . and Yellow Springs, Ohio.

Approximately 400 inbreds
. . . pure lines . . . with 5
or more generations of in-
breeding . . . were worked
with last season.

280 of these inbreds were
developed by and are used
exclusively by Pioneer . . .
120 were released for use
by various agricultural experiment stations and other
corn breeders.

Each year new inbreds are added—after they have
completed their development cycle.

Accurate records are kept on the development and
performance of each of these inbreds.



INBREEDING A STALK OF CORN



POLLEN BAGS ON TASSELS



BREEDING and TESTING

...in the Winter...

Extensive testing and breeding
research continues during the
winter months in greenhouses . . .
testing and breeding for resistance
to the various corn diseases.

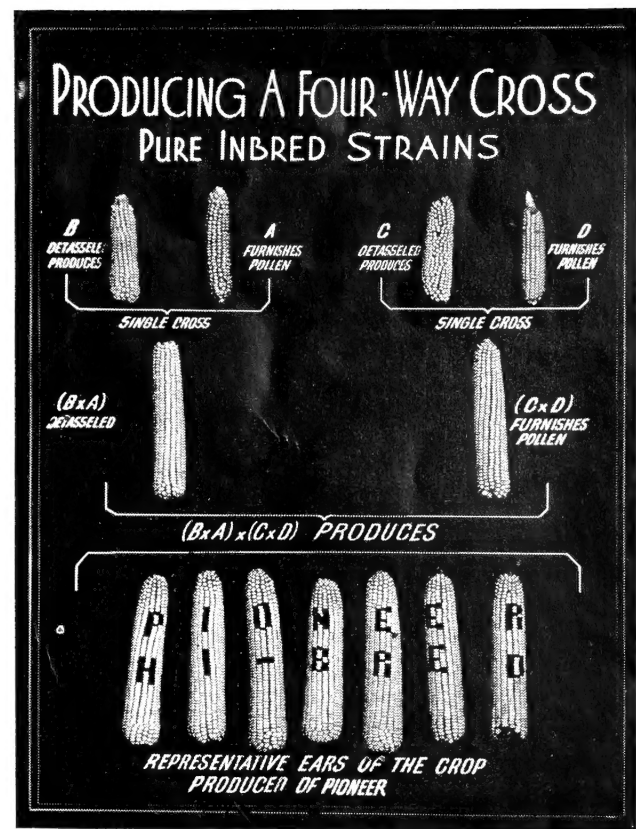
BETTER PIONEER HYBRIDS... Come from ENDLESS RESEARCH

DEVELOPING *Hybrids*

Many combination crosses of inbreds are made each year . . . single-cross . . . three-way cross . . . and double cross.

Out of the many different crosses tried . . . a few are usually found to be superior to those already produced.

Those showing the most outstanding characteristics are selected for further testing.



CONVERGENT IMPROVEMENT . . . since 1932

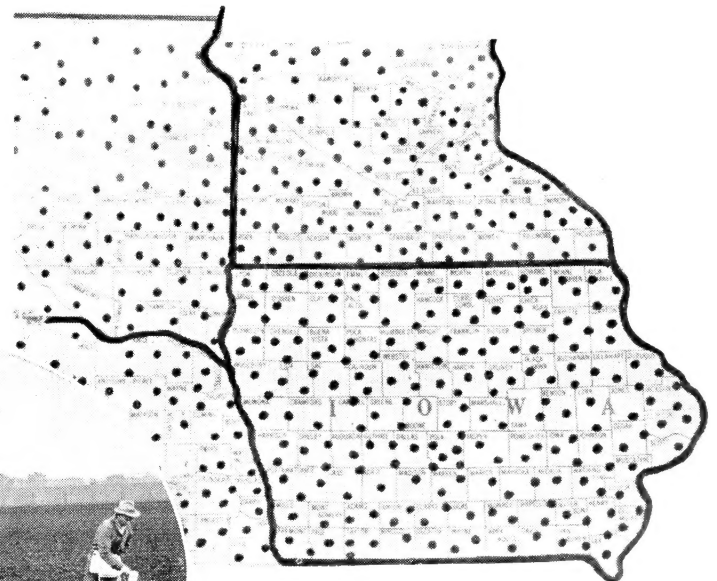
Since 1932 . . . in addition to the regular methods of inbreeding . . . Pioneer has been improving many of the original inbreds by "back-crossing." This method is sometimes known as . . . convergent improvement.

TEST PLOTS

Over 3,500 crosses are tested each year . . . in replicated, hand planted performance test plots.



HAND PLANTING



POPULARITY TEST PLOT LOCATIONS

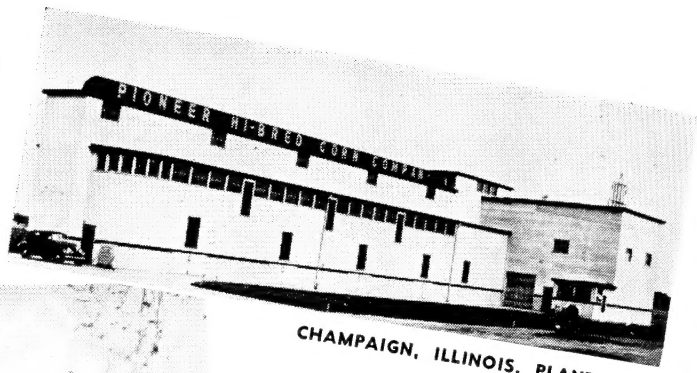
Pioneer experimental hybrids are tested . . . in the farmers' fields . . . in hundreds of popularity test plots . . . usually two or more plots in each county.

BETTER PIONEER HYBRIDS... Come from ENDLESS RESEARCH

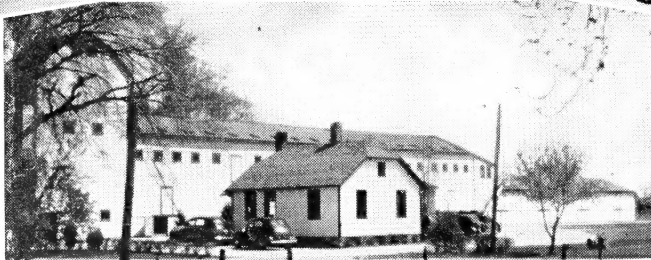


MORTON, ILLINOIS, PLANT

PIONEER
HI-BRED CORN COMPANY
OF ILLINOIS
PRINCETON, ILLINOIS



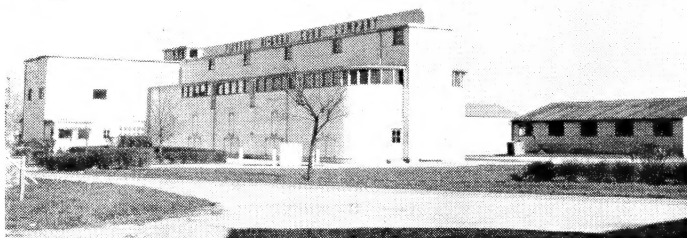
CHAMPAIGN, ILLINOIS, PLANT



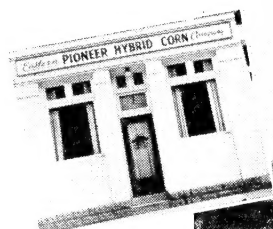
PRINCETON, ILLINOIS, PLANT



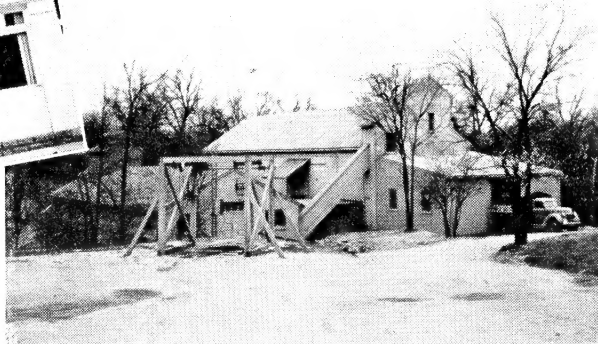
FLORA,
INDIANA, PLANT



PIONEER HI-BRED CORN COMPANY OF INDIANA
TIPTON, INDIANA



OFFICE
YELLOW SPRINGS

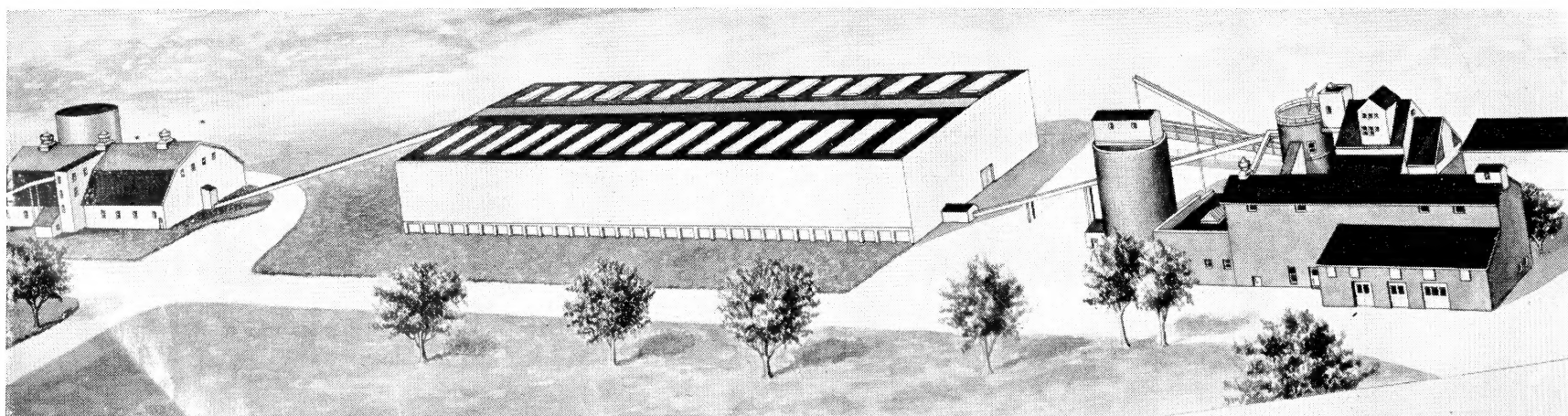


EASTERN PIONEER HYBRID CORN CO.
YELLOW SPRINGS, OHIO

PIONEER Parent Seed Corn Sold to These Companies

Each year . . . Pioneer has between 1,200 and 1,500 acres of the best farming land in the production of parent seed corn . . . the seed of which will produce the "final cross" crop of Pioneer the next year.

The average yield of parent seed corn . . . will vary between 5 and 15 bushels per acre . . . on good ground.



GARST AND THOMAS HYBRID CORN CO., COON RAPIDS, IOWA

BETTER PIONEER HYBRIDS... Come from ENDLESS RESEARCH

The

BIRTHPLACE *of* PIONEER

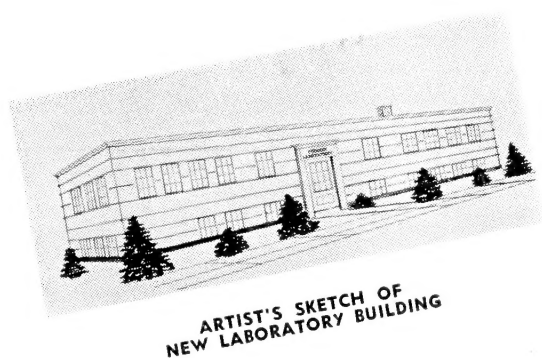
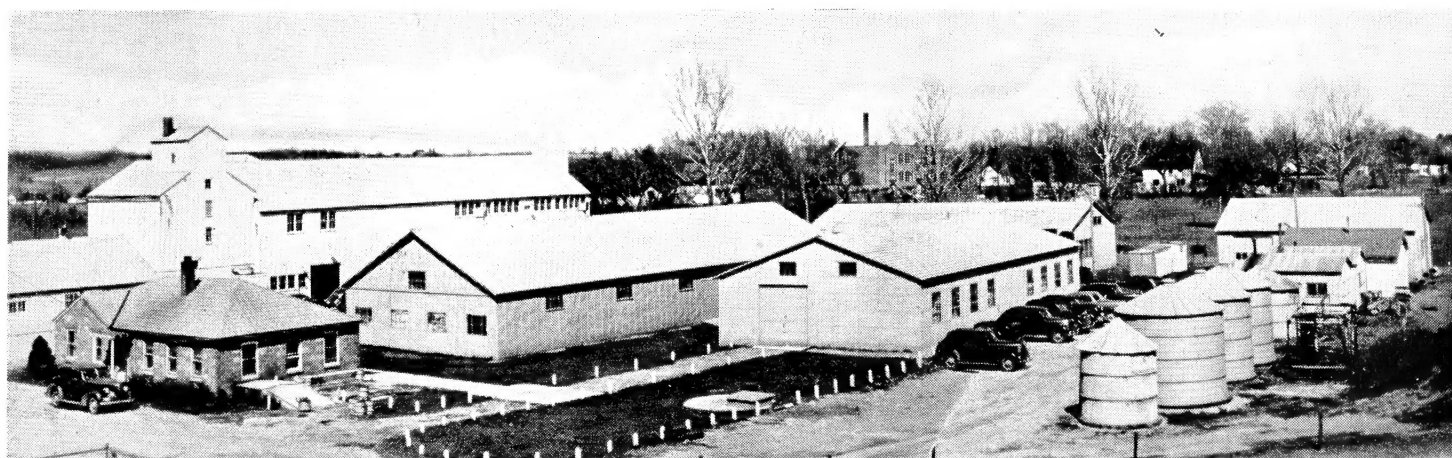
**First
PIONEER
Plant**



**1929
Johnston
Iowa**

In 1926 the company was organized. In 1929 . . . this small Pioneer plant dried a large part of the entire production of hybrid seed corn . . . in the United States.

Today! **PIONEER** *Johnston Plant*

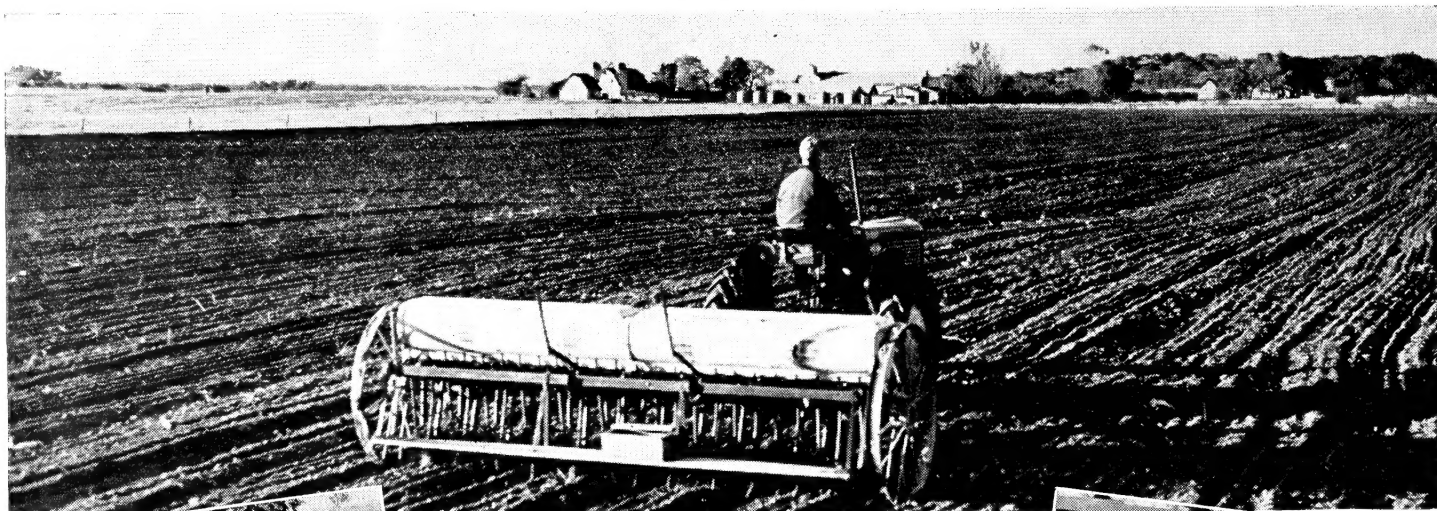


ARTIST'S SKETCH OF
NEW LABORATORY BUILDING

The above picture is a bird's-eye view of the Johnston Pioneer plant . . . today. Modern equipment used throughout . . . is replaced with new . . . whenever a handling method can be improved.

In 1944 . . . the new laboratory building shown by the artist's sketch . . . was constructed.

BETTER PIONEER HYBRIDS... Come from ENDLESS RESEARCH

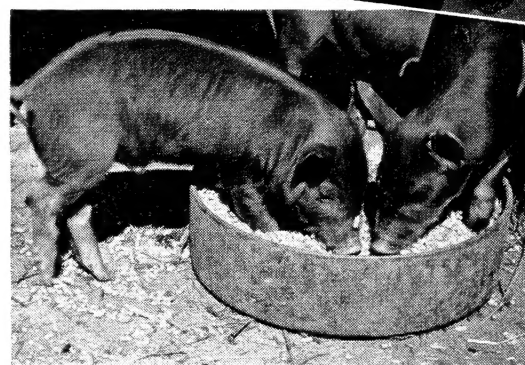


**1100 Acre
PIONEER FARM
Mainly Devoted to
Parent Corn Production**

The operation of the Pioneer farm is for the primary purpose of producing parent seed corn.

A dairy herd of 80 high producing Jersey cows and other animals . . . 250 feeding cattle . . . and 300 hogs, produce ample manure to furnish a liberal supply on every acre under cultivation . . . every second year.

Pioneer Hy-Line poultry farm produces hybrid chicks . . . fast becoming as popular as Pioneer corn.

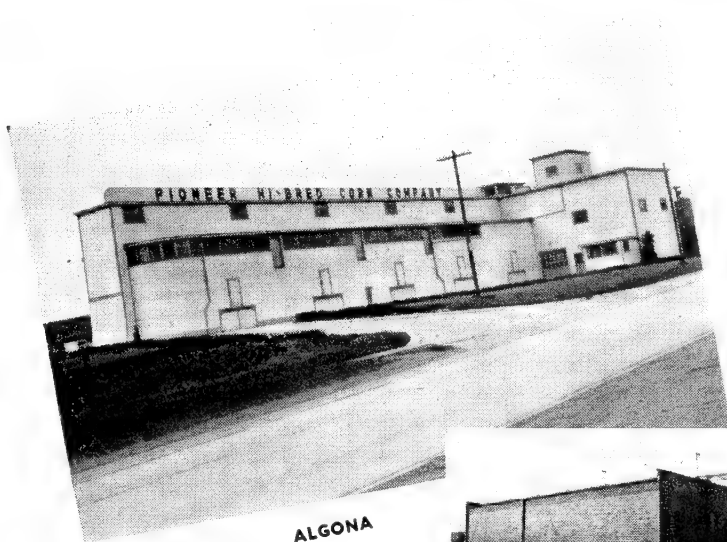


Growth Since 1926

The need for continued Pioneer expansion . . . since 1926 . . . has been almost unbelievable . . . until today, these activities and departments are centered around the Johnston farms:

1. A modern plant for commercial seed corn.
2. General offices of corn breeding department.
3. Experimental corn breeding department.
4. Parent corn production and drying plant.
5. Cold and warm germination testing laboratory.
6. Planter plate calibration laboratory.
7. Corn disease laboratory.
8. Department of testing palatability and feeding qualities of corn (hogs, cattle and rats are used for testing purposes).
9. Offices of J. J. Newlin and Wilmer Newlin (in charge of farming operations).
10. Dairy (herd of Jerseys).
11. Hy-Line Poultry Farm.

PIONEER PLANTS... *in Iowa*



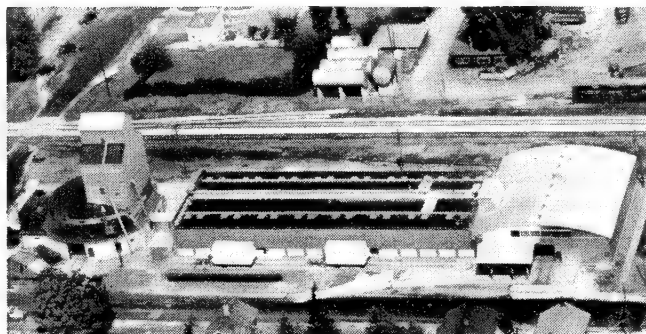
ALGONA



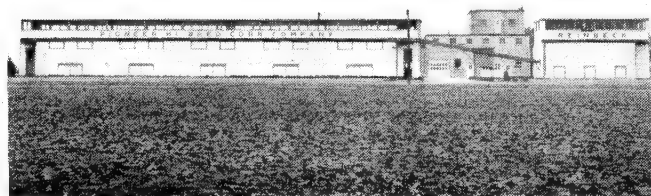
ALGONA DRYING BINS



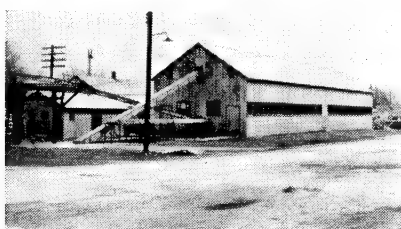
MARENGO



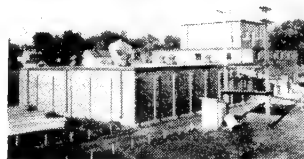
DURANT



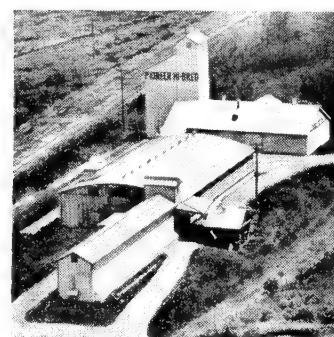
REINBECK—PLANT NO. 1



DURANT SORTING BUILDING



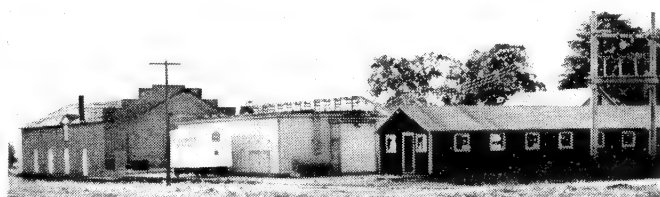
REINBECK WAREHOUSE



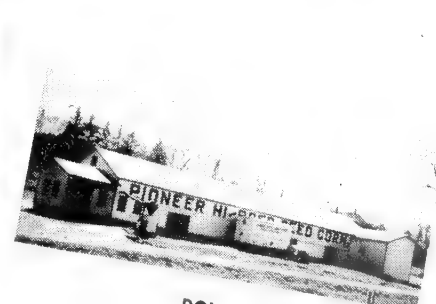
REINBECK—PLANT NO. 2



CLARION



DYSART



DOWNEY

The Pioneer plants located at Algona, Durant, Johnston, Marengo and Reinbeck are equipped for complete seed corn production.

Efficient sorting and drying plants are located at Clarion, Downey and Dysart.

PRODUCTION...

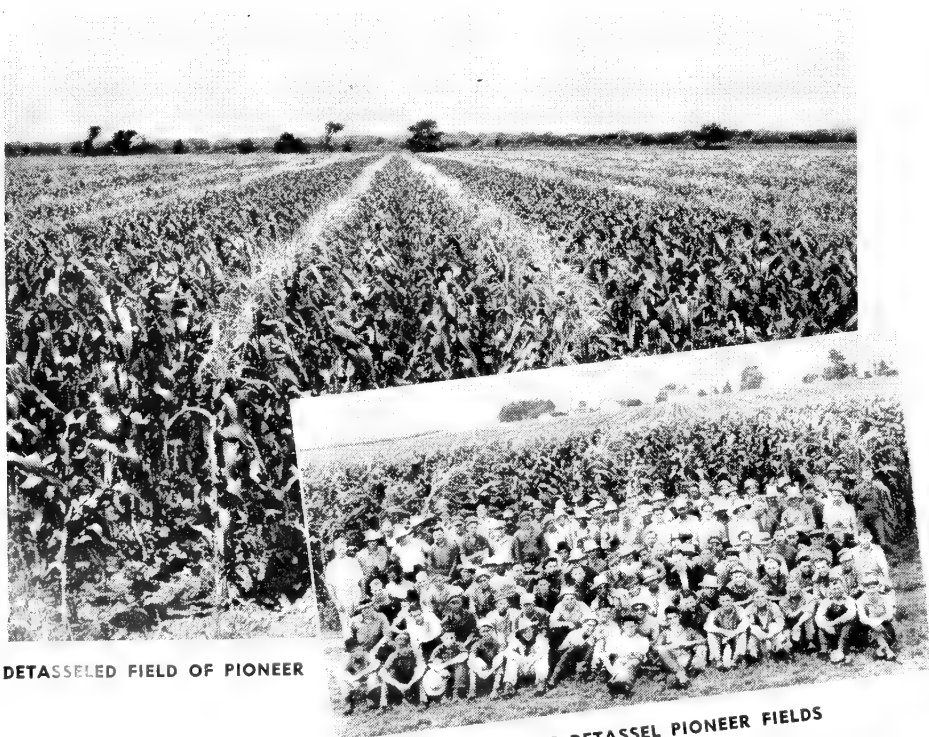
Pioneer commercial hybrid seed is raised largely by co-operating farmers living adjacent to each of the plants.



Each farmer is under contract . . . to plant in isolated fields . . . cultivate . . . harvest . . . and deliver the corn to the plant . . . all under the supervision of the Pioneer company.

Each year approximately 9,000 acres are planted for the commercial production of Pioneer for the Iowa company.

Each commercial Pioneer seed field is planted to male and female corn. The tassels are left on the male rows . . . (at least one-fourth of the seed planted) . . . and do not produce hybrid seed. The female rows (not more than three-fourths of the rows planted) . . . which produce the hybrid seed delivered to the seed house . . . are carefully detasseled.



DETASSELED FIELD OF PIONEER

HUNDREDS DETASSEL PIONEER FIELDS

The detasseling of commercial seed fields is of utmost importance in producing quality hybrids.

During the detasseling season, all of the seed fields are covered from 10 to 15 times . . . by Pioneer supervised crews.

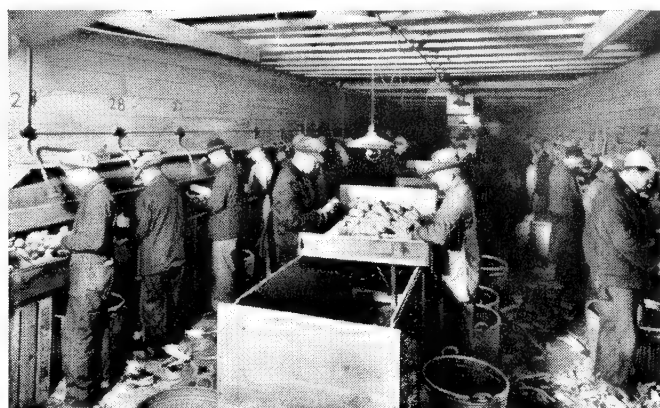
Pioneer employs between 2,500 and 3,000 detassellers—men . . . women . . . girls . . . and boys—who work in the commercial seed fields during the production season.

PIONEER hybrids carefully prepared . . .

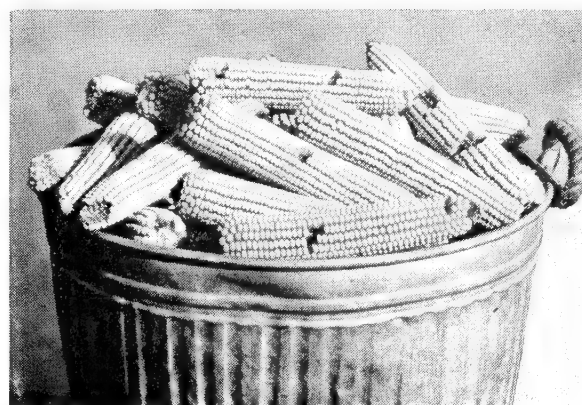


SORTING ROOM

As soon as Pioneer hybrid seed reaches the plant . . . it is delivered to the sorting department . . . on large conveying belts . . . where trained workers carefully hand sort the corn, ear by ear. Damaged kernels are picked out of the good ears . . . and the weak . . . chaffy . . . moldy . . . and off-type ears are discarded.



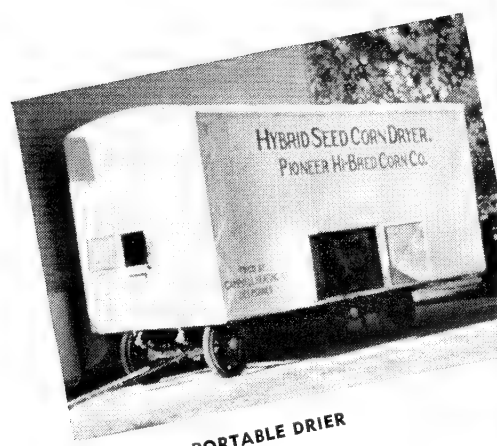
SORTERS . . . CHECKERS IN CENTER



DAMAGED CORN IS REMOVED BEFORE SHELLING

After the sorted corn has been re-examined by the checkers, it is conveyed to large bins . . . with slatted floors. Large, portable driers with oil burning furnaces and electrically driven pressure fans . . . force hot air uniformly through every part of the drying bins . . . at the rate of 46,000 cubic feet per minute. The warm air circulates upward through the slatted floors . . . into the corn . . . and out through doors above the corn.

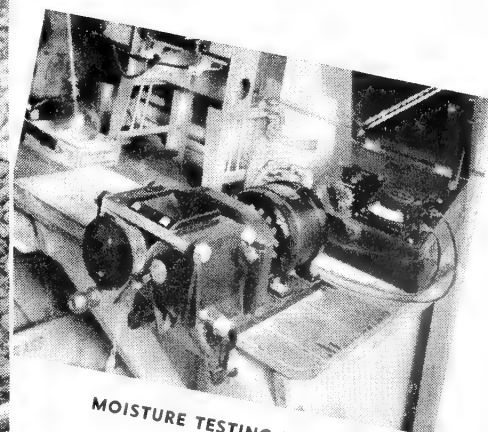
The moisture content of all Pioneer corn is reduced to 12 percent before it is removed from the bins . . . to be shelled.



PORTABLE DRIER



DRYING BIN PARTLY FILLED



MOISTURE TESTING EQUIPMENT

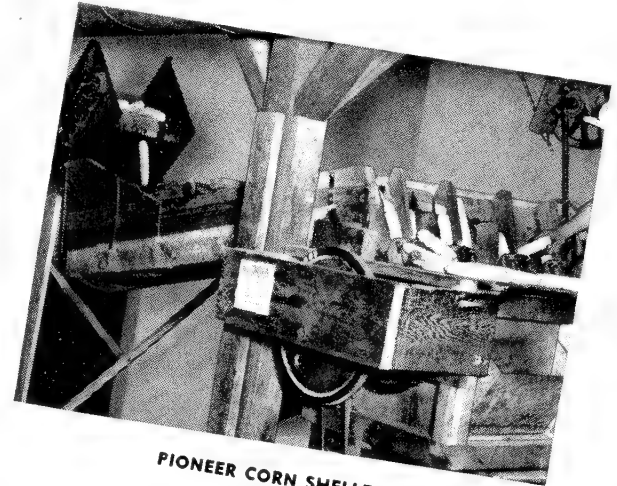
2,000 to 2,500 men, women, girls and boys are employed in Pioneer plants

Accurately GRADED...TESTED

While Pioneer hybrid seed is being conveyed to the sheller from the drying bins, it is given the third and final inspection for undesirable corn.

Seed passing the final inspection . . . is fed into specially constructed shellers . . . equipped with air-blast cleaners which blow out the dust . . . dirt . . . and chaffy kernels.

After the corn has been shelled, elevators carry it to bins, located above the grading machines.

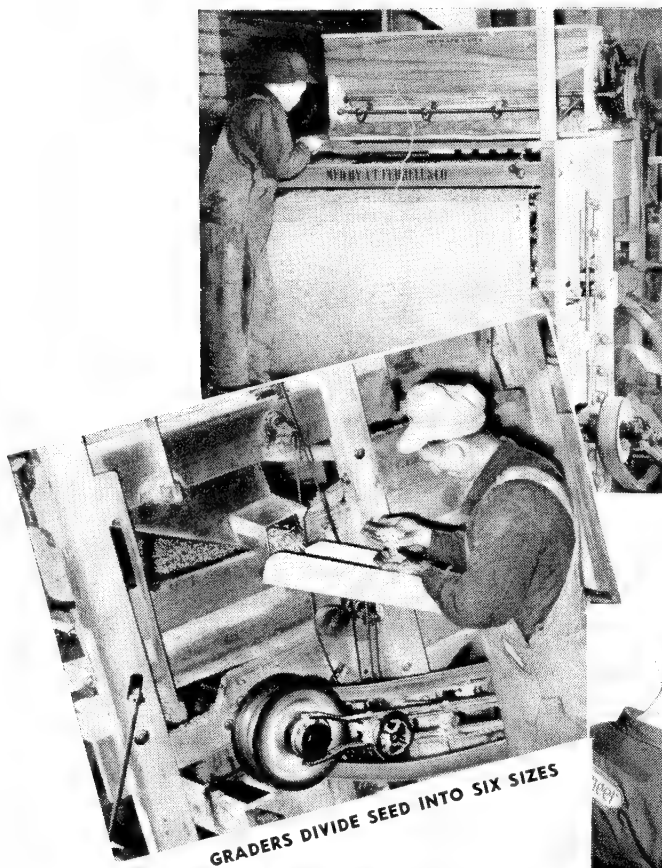


PIONEER CORN SHELLER

Grading machines accurately divide the kernels into six uniform sizes . . . large flat . . . medium flat . . . small flat . . . large round . . . medium round . . . and small round. All of the light, chaffy, cracked kernels and tips are blown out . . . leaving only the clean, healthy seed.

Seed samples representing each day's run of dried and graded corn from each plant, are sent to Pioneer's modern seed testing laboratory . . . where it is tested for germination and for accuracy of grading.

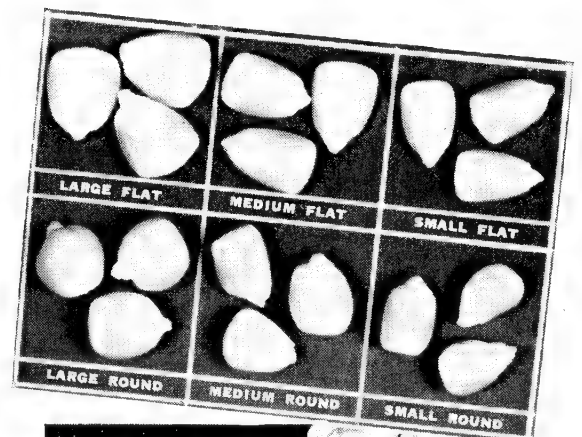
Every kernel size of each hybrid is checked in calibrating machines for proper planter plate recommendations. Each bag has a tag attached to it, listing the recommended planter plates.



GRADERS DIVIDE SEED INTO SIX SIZES



CALIBRATING . . . DETERMINES PLATE SIZES



GRADED . . . TESTED . . . TREATED

After the corn has been graded . . . passed the germination tests . . . it is then treated with mercury dust to aid germination during a cold, wet spring. It is then put up in bushel and half-bushel bags . . . sealed by sewing . . . ready for delivery in March and April.



PIONEER . . . READY FOR DELIVERY

Sales

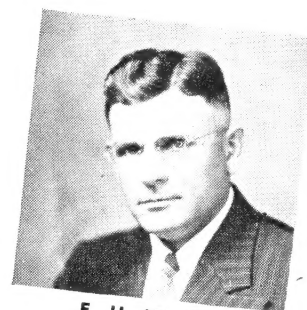
Over 300,000 bushels of
PIONEER
 sold annually in the
 "Heart of the Corn Belt"
IOWA - MINNESOTA - SO. DAKOTA



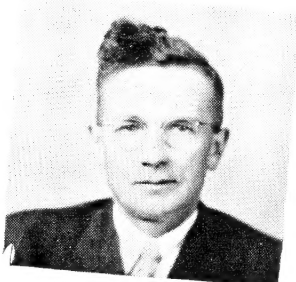
District Supervisors



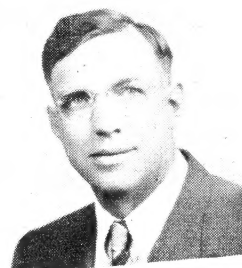
ALBERT SCRAMLIN
 Amboy, Minnesota



E. H. MOGCK
 Montevideo, Minnesota



H. W. THOMPSON
 Algona, Iowa



H. N. MILLER
 Austin, Minnesota



GEORGE KURTZWEIL
 Des Moines, Iowa



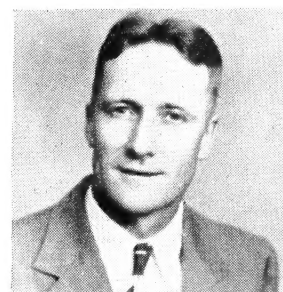
JOHN COREY
 Morning Sun, Iowa



CHRIS H. MILLER
 Clarion, Iowa



JOHN F. SMITH
 Sioux Falls, So. Dakota



MARION LIND
 Manchester, Iowa

Meet the men who supervise Pioneer representatives . . .

They spend their time working with the representatives in their territories . . . helping them do a better job of selling . . . instructing them on Pioneer sales policies.

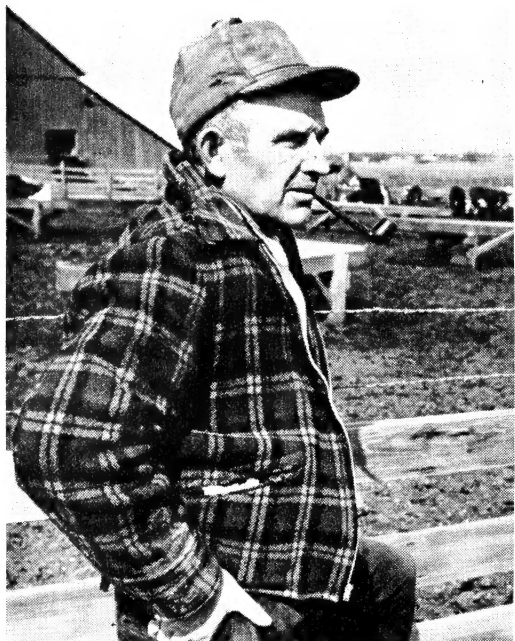
During the delivery season they are in close contact with all of their men . . . keeping the supply of corn well balanced with those varieties in demand . . . transferring surplus corn to those points where it is needed.

Between the selling and delivery seasons they are always busy . . . supervising detasseling crews . . . working in the plants . . . or wherever they are most needed.

700

Successful Farmers...

PIONEER REPRESENTATIVES



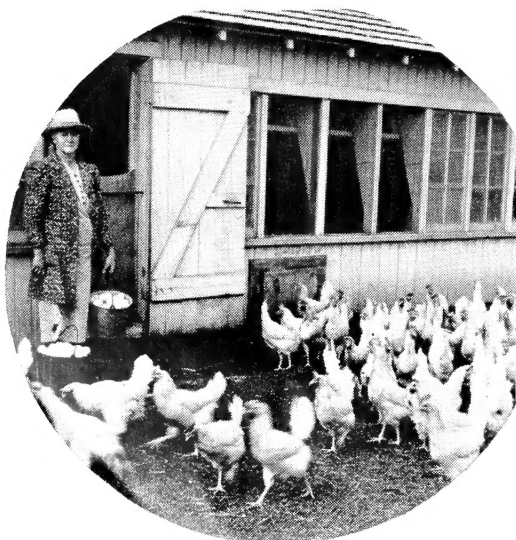
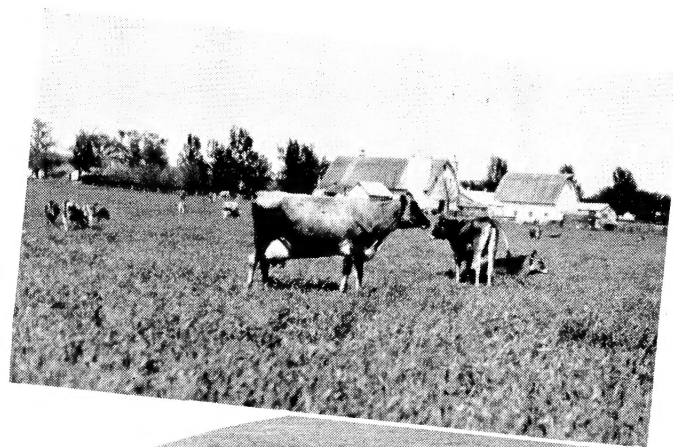
Pioneer representatives . . . most of whom never had a selling job before . . . are dependable farmers. They have territories near their own farms . . . which makes selling to their neighbors profitable during their spare time.

They are "hybrid specialists" to whom their neighbors come for advice.

They do not raise for sale . . . sell . . . or distribute any other hybrid seed corn.

Customers find Pioneer representatives give intelligent, constructive suggestions about seed corn . . . are fair and honest in their dealings . . . and the seed corn itself is satisfactory.

Over 6,000,000 acres in the cornbelt, are planted to Pioneer annually.



BETTER PIONEER HYBRIDS... Come from ENDLESS RESEARCH

CONDITIONAL ORDER

By placing a conditional order the customer gets a priority for his next season's seed corn supply . . . with privilege of cancellation . . . in case the price when announced is unsatisfactory.

These orders are usually secured at the time the customer is taking delivery of the corn ordered the previous year . . . and are written up in the space provided . . . in the lower half of the customer delivery invoice (sample shown below). For new customers . . . and at other times of the year, there is another conditional order blank which is used.

Saves

Tires — Gasoline

Not only have conditional orders proven satisfactory to the customers and to the company . . . they have helped Pioneer representatives save tires and conserve gasoline.

CUSTOMER'S COPY

PIONEER HYBRID SEED CORN				RECEIPT FOR PAYMENT ON PIONEER HYBRID SEED CORN									
PIONEER HYBRID	BUSHELS FLAT KERNELS			BUSHELS ROUND KERNELS			VALUE OF ORDER	PAYMENTS ON ORDER	BALANCE DUE ON ORDER				
	LARGE	MEDIUM	SMALL	LARGE	MEDIUM	SMALL							

REPR. NO. ORDER NO.

ORDER DATE

REPR. REPR. ADDRESS

CUSTOMER

COUNTY TOWNSHIP

REMARKS

I HEREBY PLACE A CONDITIONAL ORDER FOR DELIVERY IN 19__

PIONEER HYBRID	BUSHELS FLAT KERNELS			BUSHELS ROUND KERNELS		
	LARGE	MEDIUM	SMALL	LARGE	MEDIUM	SMALL

IF I HAVE NOT ASKED THE COMPANY IN WRITING TO CANCEL, OR CHANGE, THIS CONDITIONAL ORDER WITHIN FIFTEEN DAYS AFTER BEING NOTIFIED ABOUT PRICES NEXT FALL, I AGREE TO TAKE DELIVERY OF THE CORN SHOWN AT THE LEFT, AND WILL PAY FOR IT AT ANNOUNCED PRICES.

SALESMAN'S SIGNATURE CUSTOMER SIGN HERE FOR CONDITIONAL ORDER

SELLING PRICE

Because the cost of raising seed corn is so dependent upon the weather . . . the selling price is not announced until the months of August . . . September . . . or October.

For the entire selling season, the price of Pioneer has always been as high . . . or higher than the first announced price. If for any reason however . . . during the season . . . the price on Pioneer corn must be reduced below the price set at the beginning of the season . . . every customer buying the same grade and quality of corn . . . will pay the same price for it, regardless of when the purchase was made.

In the past . . . because of the production policy Pioneer has always maintained . . . to produce seed corn of the finest quality possible . . . the price of Pioneer has usually been as high and sometimes higher than other seed corn on the market.

Every bushel of the same hybrid and kernel size is sold at the same price per bushel.

PIONEER...THE CORN of PLENTY

FREE SEED for *Replanting*

1. IF...you notify a company representative before replanting...
2. IF...you replant to corn.

REPLANTING AGREEMENT

If, because of cutworms, floods or ANY other reason the stand of corn upon any field planted with PIONEER corn shall be so impaired or diminished that the customer DISCS UP AND REPLANTS IT TO CORN, we will furnish him free of any charge except transportation costs, a quantity of PIONEER seed equal to that required for such planting.

To take advantage of this benefit all the customer needs to do is to notify in writing the Company . . . or its sales representative through whom the seed was purchased . . . in time to permit inspection of the field before it is disced up.

If we have no seed of suitable maturity available for replanting, we reserve the right to furnish an equal amount of PIONEER seed FREE for next year's planting.

PIONEER HI-BRED CORN COMPANY
Des Moines, Iowa

**FREE
SEED**

NOTE—Customer must RE-PLANT TO CORN . . . to be entitled to free seed. Each representative is personally responsible for verifying the number of acres . . . replanted to corn.

PIONEER AWARD TO MASTER CORN GROWERS

To those farmers who are given a Master Corn Growers Medal . . . who produce a yield of 100 bushels or more per acre with Pioneer corn, in the Iowa 10-Acre Corn Yield Contest . . . sponsored by the Iowa Corn and Small Grain Grower's association . . . PIONEER AWARDS . . . one bushel of seed corn, free of charge.



PIONEER *Hi-Bred Corn Co.*
DES MOINES, IOWA